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ABSTRACT

This article focuses on the problems of simultaneous translation (SI) of scientific discussion at the Conference on Training Translators and Interpreters in the New Millennium, the development of which greatly depends on extralinguistic, external conference conditions. Text linguistics considers text not only as a grammatical unit larger than a sentence but also and mainly as a semantic unit, as a conveyer of meaning. Discussion is a very special text type. Its peculiarities arise from its oral and immediate nature. It differs from purely scientific language (characteristically objective, dispassionate, and the result of prior deliberation) and ordinary dialogue (characteristically emotionally colored, spontaneous, and having elliptical phrases). To interpret, one must understand. The message the interpreter receives and that he or she must understand in order to reconstruct it in the other language is transmitted in oral and spontaneous form. The process of SI is not a simple transformation of text from a source language (SL) into a target language (TL), but is a complex process. The fact that the recipient is both recipient and transmitter of the information simultaneously strongly influences the process of interpreting. The aim of this article is to show how the interpreter, as a low-knowledge individual, manages to establish unhampered communication between participants of a discussion speaking different languages; how he or she manages to produce a coherent bilingual text of a discussion. (KFT)

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Problems of Simultaneous Interpreting of Scientific Discussion

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Abstract

Text linguistics considers text not only as a grammatical unit larger than a sentence, but also and mainly as a semantic unit, as a conveyer of meaning.

Discussion is a very special text type. Its peculiarities arise from its oral and immediate nature. It differs on the one hand from purely scientific language, which is characteristically objective and dispassionate, and always the result of prior deliberation, and on the other hand from ordinary dialogue, which is characterised by elliptical phrases, emotionally coloured lexis and spontaneous development

To interpret one must understand. The message that the interpreter receives and that s/he must understand in order to be able to reconstruct it in the other language is transmitted in oral and spontaneous form.

The process of simultaneous interpreting (SI), is not a simple transformation of a text from a source language (SL) into a target language (TL), but is rather a complex process. The fact that the interpreter is both a recipient and transmitter of the information simultaneously strongly influences the process of interpreting.

The aim of this article is to show how the interpreter, as a low-knowledge individual, manages to establish unhampered communication between participants of a discussion speaking different languages: how s/he manages to produce a coherent bilingual text of a discussion.

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Introduction

Recent developments in linguistics have seen a marked increase of interest in the communicative aspects of language, i.e. in issues concerning the spoken word. It is our view

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that discussion most clearly represents the communicative function of language. This article is motivated by the belief that the study of SI can make a unique contribution to the study of language in use. Unlike written translation, in SI the stimulus-processing-response cycle is externally paced. Only the formulation and articulation are the interpreter's. S/he expresses the product of someone else's thoughts, assumptions, reasoning and objectives. The interpreter aims to maintain both the propositional content and intentionality i.e. 'message', while changing the code (Setton, 1999).

In this article we shall focus on some problems of SI of scientific discussion at a conference, the development of which greatly depends on the external conditions of the conference and is regulated by extralinguistic factors.

Characteristics of Discussion as a Genre

Discussion is a very special text type. Its peculiarities arise from its oral and immediate nature. It differs, on the one hand, from purely scientific language, which is characteristically objective and dispassionate, and always the result of prior deliberation, and on the other hand from ordinary dialogue, which is characterised by elliptical phrases, emotionally coloured lexis, and spontaneous development.

An analysis of actual data shows that the language of scientific discussion is typically information dense, emotionally loaded, and unfolds spontaneously.

Let us examine these characteristics of scientific discussion individually:

Information abundance. Discussion has its own particular syntax, which differs not only from written language but also from oral monologue (such as lectures and conference papers). Whilst the authors of previously prepared conference papers develop their ideas gradually, within the bounds of an overall topic, the structure of separate utterances (questions and answers) in a discussion depends entirely on the nature of interdependent responses.

As A.Luria (1965) puts it: "... the function of formulation of an idea falls to the person asking the question and I have no alternative but to answer it." (p.34).

Participants in the discussion often change the initially chosen grammatical structure of their utterances as they seek clarification and further explanation. That is why discussion is dominated by long sentences. But such phrases in oral communication are apprehended as colloquial (in contrast to certain other, frequently much less complex syntactically, but typically "bookish" phrases (Dolinin, 1972, p.65) "...the spontaneous speech of discussion merely complicates the discussion in a way which does not substantially affect its deep structure and which in any event does not overburden the hearer's memory." (Dolinin, 1972, p.66). This is amply illustrated in the following example:

"First of all /.../ the question of /.../ the /.../natural electromagnetic environment /.../ as distinct from /.../ the /.../ man-made electromagnetic environment /.../ is becoming very important for many health aspects for the reason that man is making many more /.../ types of fields /.../ with /.../ many /.../ new characteristics in frequency in duration and intensity that /.../ differ greatly /.../ from /.../ from the natural electromagnetic environment /.../ for example in cities the /.../ the intensity of /.../ the /.../ electromagnetic environment made by man is typically ten thousand times greater in intensity than the natural electromagnetic environment."

It is easily seen from the above example that the statement (from a discussion source) contains a number of compound and complex sentences, often with multiple subordinations.

Emotionality. Some linguists claim that scientific language is neutral and devoid of emotionality, and any emotional colouring is incidental.

Our study of speech transcripts shows that discussion invariably carries substantial emotional loading connected with a scientist's attitude towards a particular fact. In stating, elaborating and defending their views, as well as in their critique of the views of colleagues, scientists rely not only on a system of strict logical argumentation, but also on emotional effect which is expressed in their speeches: "...emotional colouring is intended to change the emotional disposition of the listener..." (Wolf, 1985, p.41). In their evaluation of the works of

colleagues, scientists do not confine themselves to purely logical statements, but add their own subjective opinion using expressive words and phrases. Here is an example:

"Professor Horn // Professor Horn /.../ really raised an // an *important* question when he talks about the interaction between /.../ genetic and environmental influences /.../ and in imprinting /.../ This is a *beautiful* example of very close interaction between those two."

Activity which is supported by emotions is much more successful than activity devoid of emotionality (Dodonov, 1978, p.39).

In spontaneous speech emotional colouring may be introduced in the form of humour, which may release tension, such as:

"The impossible we can do immediately, miracles take a little longer."

"I did not realise that I would be presiding over this unruly group and put them together."

The purpose of a discussion is to find a solution to matters of dispute; at this stage the scientific ideas are hypothetical and not yet fully formulated. Therefore emotional colouring as a means of expressing an idea is essential to the discussion process.

Science is constantly confronted with phenomena and concepts for which existing terminology is inadequate. In such cases it has recourse to intuition and the language of imagery, as noted by A.Potebnya:

"...Wherever a scientific concept has not yet become established, there we shall find the language of imagery" (Potebnya, 1915, p.125).

We regard metaphors and comparisons in a scientific discussion as types of denotative imagery, as a way of using the lexical resources of a language in the process of acquiring and imparting knowledge. This can be seen in the following examples:

"But we // a neuropsychologist, by name Robert Effron, tested our patients and he found that in every single patient there is the so-called *Cocktail Party Effect*."

"The messenger enzymes act by placing frustrated groups // on other enzymes including one we call in English *Odyssey*, and *Odyssey* is central in normal cells and cancer cells."

It is easy to see how the statements are emotionally loaded by the scientists' personal evaluation of specific phenomena.

Spontaneity. Discussion is an integral text. It always takes place within the confines of a particular topic. On the one hand, discussion is by nature spontaneous, and on the other hand it always contains evidence of prior deliberation, being the conviction of scientists who try to win others over to their views.

Discussion usually takes place after the delivery of a scientific paper, although, strictly speaking, it begins already during the process of hearing the paper because the listeners are evolving an attitude to the main ideas which subsequently become the focus of discussion (Chachibaia & Colenso, 1999, p.220).

In the process of discussing an issue, scientists will often, for the purpose of clarification, refer to problems which were not mentioned in the research paper in hand, but in other publications. In this process of explication oral speech reveals its specific character. Participants in the discussion will depart from the initially chosen structure of their utterances because they seek clarification, further explanation and additional information. For example:

"Professor Horn // Professor Horn /…/ really raised an /…/ an important question when he talked about the interaction between /…/ genetic and environmental influences /…/ let me // let me just define it some /…/ little more carefully."

Scientists engaged in discussion speak with some agitation as they try to convince their listeners of the advantages of some research method, scientific view and so on, and, as is common in oral speech, they often repeat themselves. The level of expression lags behind the level of content, the speakers do not have time to reformulate their ideas and they resort to the original formulation, as is the case in this example:

"This is a kind of glib term, but what it means is /…/ that /…/ such patients /…/ cannot // cannot distinguish between multiple specially oriented sound sources. The cocktail party // party /…/ that means that you can // at the cocktail party one can talk with someone and overhear conversations and understand them at one side of you."

As we see from the examples, utterances in a discussion do not always conform to rules. The constraints of time and the rapidity of speech are not conducive to the strict observance of rules.

A simultaneous interpreter inevitably faces the problem of rendering these characteristics (information abundance, emotionality, spontaneity) of discussion. S/he tries to cope with the problem of interpreting:

- information-dense strings which tax both listening/analysis and production capacity.
- Unusual, or ungrammatical linguistic structures, which tax the listening effort and where syntactic differences require reordering.

These examples illustrate how all the characteristic features of a discussion are rendered from the SL text into the TL text:

Simultaneous interpreting of an information dense sentence:

Source text:

Когда мы подошли к итогам /…/ вот к этим итогам, с точки зрения вот /…/ саморегуляционных механизмов мозга, и попробовали проанализировать таким образом, то оказалось, у /…/ животных, у которых мы получили положительный эффект, очень хорошо были выражены саморегуляционные механизмы.

Transliterated Russian source text

Kogda my podoshli k itogam /…/ vot k etim itogam, s tochki zreniya vot /…/ samoregulyatsionnykh mekhanizmov mozga, i poprobovali proanalizirovat' takim obrazom, to okazalos', u /…/ zhivotnykh, u kotorykh my poluchili polozhitel'nyi effekt, ochen' khorosho byli vyrazheny samoregulyatsionnye mekhanizmy.

Simultaneous interpreting I	Simultaneous interpreting II
When we approached those results /…/ from the point of view of /…/ of self-regulatory mechanisms of the brain and /…/ tried to analyse it in /…/ from this angle it appeared that /…/ that in animals with positive effects self-regulatory mechanisms were very well-expressed.	When we approached the results /…/ from the viewpoint of self-regulation mechanisms of the brain and tried to /…/ to analyse it, we found that the animals who have positive effects, had very pro-// pronounced self-regulation mechanisms.

Simultaneous interpreting of emotionally coloured speech:

Source text

В общем-то наверное мало кто работает так /…/ комплексным подходом к этой проблеме как Михаил Георгиевич и между прочим этот комплексный подход и даёт те

результаты, которые мы имеем в этих исследованиях. Просто *блестящие* исследования, и вот // та // давайте я оценю это исследование просто как *блестящее* в этой стране.

Transliterated Russian source text

V obshchem-to navernoe malo kto rabotaet tak /…/ kompleksnym podkhodom k etoi probleme kak Mikhail Georgievich i mezhdu prochim etot kompleksnyi podkhod i daet te rezul'taty, kotorye my imeem v etikh issledovaniyakh. Prosto *blestyashchie* issledovaniya, i vot // ta // davaite ya otsenyu eto issledovanie prosto kak *blestyashchee* v etoi strane.

Simultaneous interpreting I

Few people probably work in such a complex way on the problem as Mikhail Georgievich does. And /…/ this complex approach produces the results that we have. *Brilliant, brilliant* results! I wish to assess them as *brilliant* research in this country.

Simultaneous interpreting II

Few people work in such a complex way as Mikhail Georgievich does.This comprehensive approach gives the result /…/ that /…/ we have/ these are *brilliant* investigations. This is // This is how I evaluate this kind of approach. I would simply say - this is a *brilliant* research.

Simultaneous interpreting of spontaneous speech:

Source text:

Профессор Карел Гехт с каждым разом даёт нам не только шире, но и довольно // всё глубже и глубже вникает в эти механизмы патологических состояний и то что сегодня опять мы слышали вот эти // доклад совместно с Эме // значит /…/ вот /…/ тут ясно субстанция "П" она играет какую роль во всём этом? Единственное что хочется пожелать профессору Карелу Гехту скорее дать клиническое // понимаете // подтверждение всех этих данных.

Transliterated Russian source text

Professor Karel Hecht s kazhdym razom daet nam ne tol'ko shire, no i dovol'no // vse glubzhe i glubzhe vnikaet v eti mekhanizmy patologicheskikh sostoyanii i to chto segodnya opyat' my slyshali vot eti // doklad sovmestno s Eme // znachit /…/ vot /…/ tut yasno substantsiya "P" ona igraet kakuyu rol' vo vsem etom? Edinstvennoe chto khochetsya pozhelat' professoru Karelu Hechtu skoree dat' klinicheskoe // ponimaete // podtverzhdenie vsekh etikh dannykh.

Simultaneous interpreting I

Professor Karel Hecht at every stage gives /…/ more and more /…/ profound description of the mechanisms of /…/ the pathological states and what we have today once again // the report with Eme // substance "P" has an important role /…/ to play in this /…/ so I wished // I wish Professor Hecht to produce a clinical confirmation of all these data.

Simultaneous interpreting II

Professor Karel Hecht. Each time he /…/ he gives us more and more information // the mechanisms of the pathological states and today /…/ we have listened to a joint paper // paper jointly presented /…/ and I want to /…/ express the wish that Professor Hecht should give us a clinical confirmation of his data.

The examples show that, in simultaneous interpreting, the degree of simplification or reduction of complex sentences of spontaneous speech is fairly low. Following the spontaneous speech of the speaker, interpreters preserve the form and the style of the original speech.

The emotional colouring of the discussion is fully preserved by the interpreters, which enables the listener(s) to perceive the whole discussion as an integral, coherent text.

Under extreme pressure of time, interpreters' speaking rate is dictated by the speaker. Therefore the rendition preserves the spontaneity of the original speech as a whole, but the interpreters reorder sentence structures in the TL wherever it is necessary.

Interpreters apprehend in the speaker's utterances the sense rather than the words themselves; they correlate it to reality, and in turn produce their text in the TL. Making all the necessary corrections to the spontaneous speech of each participant in the discussion, interpreters translate in such a way that the target text (English and Russian alternately) is understood by the English-speaking and Russian-speaking participants respectively.

Participants in a discussion make a text of a discussion coherent by supplying as much of their knowledge as is necessary to make sense of it. When people communicate, knowledge is an essential prerequisite for the process of text comprehension as such. In the process of bilingual communication the interpreter is an essential figure who connects one knowledge system with another.

Discussion is a coherent text produced by all its participants in the process of communication. It always takes place within the confines of a global topic, and this global theme in turn is reflected in particular speeches (questions and answers). The response usually includes reiteration of items contained in the question. The question is a logical continuation of a particular answer. An underlying logical structure of a text of a discussion guides the interpreter through the text.

Coherence of a text of a discussion is determined by the integrity of the topic and is achieved by a combination of factors such as:

1. the logic of the exposition;
2. the communicative orientation of utterances;
3. the particular organisation of linguistic and extralinguistic means.

Interpreting of a discussion should be regarded as the interpreting of a coherent text (Chernov, 1978, p.114). However, the text of a discussion is not presented as a complete whole to interpreters and this deprives them of the opportunity to edit their renditions, which are being produced under extreme pressure of time (Chernov, 1987, p.10). Interpreters conduct their internal programme and generate the text of their rendition by virtue of their background knowledge, their familiarity with the topic, their foreknowledge of the total context, as well as the principal machinery of simultaneous interpreting – probability prediction.

Discussion is a highly redundant text, it is predictable. The one who answers the question repeats almost the same semantic components of the utterance as were used previously by the collocutor. A high degree of semantic redundancy facilitates the interpreter's task.

The following example illustrates how an interpreter manages to produce a coherent text of a discussion and thus to establish a successful communication between participants speaking different languages.

Question	Simultaneous interpreting
Вот *магнитно-ядерный резонанс*, который используется в Монреальском неврологическом институте /...../ у вас аналогичное тоже исследование, по аналогичной методике или *позитронно-эмиссионная* только *томография? Магнитно-ядерного резонанса* вы /…/ не использовали для обследования вашей группы /…/ больных?	The *magnetic- nuclear resonance* which is used in Montreal Neurological Institute /…/ do you use the same method in your research or /…/ only /…/ *Positron Emission Tomography*? Did you use /…/ *magnetic-nuclear resonance* with your patients?

Russian Question transliterated:

Vot *magnitno-yadernyi rezonans*, kotoryi ispol'zuetsya v Monreal'skom nevrologicheskom institute /…/ u vas analogichnoe tozhe issledovanie, po analogichnoi metodike ili *pozitronno-*

emissionnaya tol'ko *tomografiya*? *Magnitno-yadernogo rezonansa* vy /…/ ne ispol'zovali dlya obsledovaniya vashei gruppy /…/ bol'nykh?

Answer

Yes, we have used *magnetic-nuclear resonance* and /…/ it is a valuable test, but /…/ in the sense // since // at the present time only as a *CT-scan*. It is an important *CT-scanner*. That is to say /…/ showing /…/ *structural abnormalities.* Now, at the present time, it is a measure only as you know of protons/ or hydrogen content, when /…// and /…// if /…// and /…/ probable // is probable that it will go on to phosphorus and other ions, it may be possible that it does // will show some type of *metabolic activity,* but, at the present time it does not.

Simultaneous interpreting

Да мы применяем *магнитно-ядерный резонанс.*Это весьма эффективный метод. Однако в настоящее время мы применяем *сканирующее устройство "CT",* которое помогает видеть *структурные аномалии.* В настоящее время мы измеряем только прото /…/ содержание протонов и /…/ водо /… / водорода. Возможно в будущем можно будем употреблять и /…/ другие ионы и может быть в будущем это получится – определить *метаболическую активность.* Но пока этого не удаётся.

Russian rendering of Answer transliterated:

Da, my primenyaem *magnitno-yadernyi rezonans.* Eto ves'ma effektivnyi metod. Odnako v nastoyashchee vremya my primenyaem *skaniruyushchee ustroistvo CT,* kotoroye pomogaet videt' *strukturnye anomalii.* V nastoyashchee vremya my izmeryaem tol'ko proto /.../ soderzhanie protonov i /.../ vodo /.../ vodoroda. Vozmozhno v budushchem mozhno budet /.../ upotreblyat' i /.../ drugie iony i mozhet byt' v budushchem eto poluchitsya – opredelit' *metabolicheskuyu aktivnost'.* No poka etogo ne udaetsya.

There are specific terms in this exchange which interpreters can render easily, although they would not know the terms themselves, e.g. *Positron Emission Tomography, CT-scan, metabolic activity,* structural abnormalities.

If we place side by side a transcript of a question in Russian and a transcript of the response in English, we get a coherent bilingual text of the discussion. From the response we see that the TL text evokes in the English-speaking listener the same associations as the question in Russian evoked in the Russian-speaking listeners. Understanding is enhanced not only by high-quality interpreting but also by the shared background knowledge and interests of all the participants.

If we compare the text of a question in Russian (or English) with the translation of the response in Russian (or English) we get a coherent microtext of the question/response pair and thus a coherent text of the discussion as a whole.

The success of an interpreter's work depends, apart from the essential professional skills, on such factors as:

- orientation of the message to more or less restricted audience which is usually well-informed on the subject under discussion;
- the high degree of subjective redundancy in the participant's speeches;
- the relatively low speed of delivery.

The data gathered while observing interpreters at work at international symposia show that the level of efficiency of bilingual communication is so high that it is as if the discussion proceeds without the interpreter. The correct semantic set-up which underlies the machinery of probability prediction is the basis of successful bilingual communication.

Notes

1. The article is based on an analyses of recordings made at international symposia, mainly in the fields of natural science, medicine, physiology, neurobiology and neurosurgery.

2. The dots between oblique slashes denote pauses and hesitations in the speaker's speech, and, in subsequent examples with the interpreter's rendering alongside, pauses and hesitations in the interpreter's delivery.

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